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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,255	04/27/2000	Masajiro Iwasaki	R2184.0075/P075	2233

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DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP  
2101 L STREET NW  
WASHINGTON, DC 20037-1526

EXAMINER

GOOD JOHNSON, MOTILEWA

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 07/25/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/559,255

Applicant(s)

IWASAKI, MASAJIRO

Examiner

Motilewa A. Good-Johnson

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This office action is responsive to the following communications: Application, filed on 04/27/2000; Amendment A, filed 04/28/2003.

**This action is made final.**

2. Claims 1-18 are pending in this application. Claims 1, 9 and 17-18 are independent claims. Claims 1, 9, 17 and 18 have been amended.

3. The present title of the application is "Presentation of Images Resembling Each Other" (as originally filed).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Jain et al., U.S. Patent Number 6,121,969, "Visual Navigation in Perceptual Databases", class 345/850, 09/19/2000, filed 07/29/1997.

As per independent claim 1, a method of displaying images that resemble each other, comprising the steps of: extracting image features from images; (Jain discloses

extracting records from databases to search for attributes within images, col. 10, lines 1-67) dividing a feature space of the image features into sub-spaces having a hierarchical structure; (Jain discloses defining a display space metric derived from metrics defined by a the user, col. 10, lines 35-41) generating a tree structure having the sub-spaces as nodes thereof; (Jan discloses ranking the images within a data store on the basis of similarity, col. 9, lines 35-41, see figure 2A and 2B) dividing a display space into divided spaces reflecting the tree structure; (Jain discloses the display presents the images within the manifold as a perceptual space having geometry in accordance with the ranked images, col. 9, lines 42-52, figure 10) and assigning the image to the corresponding divided spaces . . . (Jain discloses images laid out in a perceptual space based upon a query of related images, col. 8, lines 12-20, figure 8)

With respect to dependent claim 2, dividing a feature space includes a step of generating clusters having a circle shape by applying a clustering method recursively. (Jain discloses recursively interacting with a database, col. 11, lines 1-2, and further discloses the distributing or clustering in each axis of the display, see also figure 6)

With respect to dependent claim 3, clustering method includes the steps of: obtaining a distance between an image feature and one of the clusters closest to the image feature . . . ; selecting an image feature successively from the image features . . . ; obtaining an increase in a radius of each cluster . . . ; and making the selected image feature belong to a cluster that has the smallest radius increase. (Jain discloses clustering and tightly clustering based upon a criterion to disperse objects having similar features, col. 11, lines 35-50)

With respect to dependent claim 4, dividing the display space includes the steps of: dividing the display space in a direction of a selected dimension . . . for a given node of the tree structure . . . ; and repeating said step by changing the selected dimension as a new node is selected . . . (Jain discloses the display space is a subset of three dimensional Euclidean space contained by a unit cube and further discloses the distribution of images in the space uniform with respect to the metric of the space, col. 6, lines 30-44)

With respect to dependent claim 5, provides extra spaces between the divided spaces such that the extra spaces represent gaps between the nodes. (Jain discloses the images are grouped in accordance with their three-dimensional vector distances from the origin or reference image, col. 27, lines 31-38)

With respect to dependent claim 6, divides the display space such that the divided spaces corresponding to the respective nodes have sizes proportional to number of image features . . . (Jain discloses the display displays the object positionally with the plot, col. 17, lines 1-7)

With respect to dependent claim 7, divides the display space such that the divided spaces corresponding to the respective nodes have sizes proportional to sizes of the sub-spaces . . . (Jain discloses the displayed plot permits a relative axis and ranking order of some criteria, col. 17, lines 8-24)

With respect to dependent claim 8, adjusting sizes of the divided spaces such that the sizes of the divided spaces corresponding to the respective nodes reflect numbers of image features belonging to the respective nodes and sizes of the sub-

spaces corresponding to the respective nodes. (Jain discloses a display of data object at small scale and relocating the scale objects, col. 27, lines 39-67, see also figures 6-9)

As per independent claim 9, 17 and 18, they are rejected based upon similar rational as above independent claim 1.

With respect to dependent claim 10-16, they are rejected based upon similar rational as above dependent claim 2-8 respectively.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6,240,423 B1      Hirata      707/104.1      05/29/2001      04/22/1998

Method and system for image querying using region based and boundary based image matching.

6,269,358 B1      Hirata      707/1      07/31/2001      06/16/2000

Method and system for similarity-based image classification.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Motilewa A. Good-Johnson  
Examiner  
Art Unit 2672

mgj  
July 8, 2003



**MICHAEL RAZAVI**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**